ABSTRACT
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COOLING SYSTEM FOR FUEL CELLS

The invention relates to a device with a fuel cell or a stack of fuel cells, wherein one electrode of a fuel cell is separated from an adjoining channel or chamber through which an operating substance is supplied by means of a perforated plate. The size and/or the density of the holes increases towards the edge starting from a median line and the median line extends in parallel to the direction of flow of the operating substance. The inventive device more reliably avoids thermal gradients in the interior of the fuel cell or of a stack of fuel cells. In order to prevent the occurrence of temperature gradients, the device is cooled by evaporating a coolant in an external cooling system. The heat is mainly transferred by thermal radiation.